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RP:0063

Mr. James K. Ikeda, Deputy Director
Environmental Health
Department of Health
P.O. Box 3378
Honolulu, Hawaii 96801

Dear Mr. Ikeda:

Honolulu Resource Recovery Facility
Draft Ambient Air Quality Impact Report
Draft Permit Conditions
Summary of Revisions to
Draft Permit Conditions Approval to Construct

In accordance with the request of August 14, 1986 from the Department of Health (DOH), we have reviewed the Draft Ambient Air Quality Impact Report HI-84-01, the Draft Permit Conditions, and the Summary of Revisions to Draft Permit Conditions Approval To Construct (HI-84-01). Members of the University contributing to this review are: Keith Chave, Oceanography; Peter Flachbart, Urban and Regional Planning; Ted Norton, Professor Emeritus Pharmacology; and Reginald Young, Engineering. The following comments and questions regarding the environmental issues pertinent to the construction of the Honolulu Resource Recovery facility are provided for your information and response.

General Comments

The proposed Honolulu Resource Recovery facility is widely recognized as a necessary and essential alternative to the solid waste disposal problems of Oahu. The advantages of such a facility need not be repeated here except to note that they are so universally recognized that tens if not hundreds of similar facilities are in operation, or under construction, on the mainland and in Europe. In EPA region nine alone we are aware of some 21 such plants. The present issue of concern, therefore, is not with the construction of the proposed facility but with the plan to permit operation without dry scrubbers and baghouse emission controls.

The rationale presented by the city for exemption from the emission controls required on all other such facilities is based on economics and the lack of any immediate health effects of the proposed discharge given

the high quality of the ambient air. Since acute health effects are not the immediate issue, the City has argued that costs of the scrubbers and bag house would not be justified by the benefits (clean air) received. Others have expressed concern for the long term effects of the pollutants and indicated that the purpose of the Clean Air Act is the "prevention" of deterioration of air quality not "treatment" of the problem after it exists. An analogy might be found in the health field in terms of vacination to prevent disease versus treatment after the infection is manifest. Rather than repeat the various arguments supporting each view, which were set forth in the public hearing and again at the information meeting of September 2, 1986, we have, per directions from the DOH letter,reviewed the permit and air quality materials provided and prepared a list of questions whose answers seem necessary prior to making a decision on the exemption of flue gas scrubbers and bag house for the HPOWER plant.

Specific Comments

1. There are 21 waste to energy plants in EPA region 9, each with full scrubbers and baghouses. We assume that most, if not all, of these plants were economically justified, otherwise they would not have been constructed. Has DOH determine how and why the HPOWER plant differs in design so as to make it economically unjustifiable with emission controls?

2. The question of precedence has been raised. Community acceptance of Geothermal development hinges on a committment by the State to require full emission controls. If no scrubber or baghouse are required on the HPOWER plant could the same economic arguments lead to a lack of, or relaxation of, emission controls for other industries such as Hawaiian Electric or the proposed Geothermal developments? We would assume that EPA may face a similar regulatory dilemma in meeting their responsibilities under the Clean Air Act if they permit construction without emission controls.

3. The City has stated that a Flue gas desulfurization (FGD) system and baghouse would cost $12.5 million. It is our understanding that a full baghouse and scrubber for the Long Beach, California plant cost approximately $6.4 million and handles about 50 percent of the waste volume projected for HPOWER. While we would assume that a scrubber-baghouse designed to handle the larger volume would cost more, it does not seem likely that it would double the cost. Since this is one of the key economic figures upon which the scrubber issue rests, has DOH independently verified the accuracy of this estimated cost?

4. The initial cost of the FGD system for HPOWER has been estimated at $12.5 million. Additional annual costs in operations of $2.8 million and loss in net electrical generating incomes of $1.7 million are attributable to the FGD system (p. 9, Ambient Air Quality Impact Report). Over the 20 year expected life of the

resource recovery facility these added costs for the FGD system total $102.5 million. The figures provided in the Air Quality report, however, cite a cost increase attributable to the FGD system of $204.6 million, ($567.4 - $362.8 millions). The source of the extra $102.1 million is not given. Either there is an error of $102.1 million or there are additional costs not indicated in the text. In either case what are the actual costs of each of the flue gas emission control alternatives including the lime injection-dry sorbent system? What are the added costs of the required appurtenant facilities for the dry sorbent injection system, and the installation of the system itself? Each alternative should be separately itemized so that the costs of each emission control system can be examined against the base cost of the resource recovery system.

5. What is the rationale and basis for the proposed SO2 limit of 143 ppm (30 day rolling average)? Since all other emission limits are given in terms of 3-hour averages (p. 5-7, Permit Conditions) why is the SO2 limit given a 30-day rolling average?

6. The estimated emissions from the project are tabulated on page 7 of the Air Quality Impact report. The values given for the "controlled emmissions" should include the values that would be obtained with the proposed dry sorbent injection system and also the FGD systems for comparative purposes. Furthermore, the percent effect of the HPOWER emissions on the PSD Increment depends on the location of the samples. A single table should be drafted illustrating the effects at several locations surounding the cite of the HPOWER facility.

7. The letter of June 6, 1986 from EPA to DOH called attention to the need to consider the impacts of pollutants other than those for which standards have been established. We note in the Ambient Air Quality Impact Report (p. 7) that only particulates and SO2 will be controlled by the procedures proposed, leaving "major" or "significant" sources of NOx, CO, Pb, Hg, F, and Be. Why are HCl, furans and dioxin not included in Table 1? The potential effects of all these other pollutants need to be considered and HCl, furans and dioxin should be added to the list.

8. Dioxins and furans present a potentially greater environmental hazard than SO2. Away from light, they are stable and once they reach soil particules they are persistent chemicals with significant potential for contamination of the food chain. What is the basis (publication?) for the statement that dioxins and furans will be eliminated by combustion temperatures above 1600F? What are the monitoring plans for dioxins and furans? What will be done if they exceed safe limits? What are the "safe" limits and how were they derived?

9. It is our understanding that upon promulgation, the HPOWER plant will be subject to compliance with the performance standards for Resource Derived Fuel (RDF) fired boilers presently being circulated for review (Fed. Register, June 19, 1986). Unless significantly altered, these proposed standards will require FGD systems and a 90 percent reduction in SO2 emissions. Whether it is prudent for the City to proceed with no controls at this stage and risk higher costs for redesign and implementation of the required FGD systems after the plant is constructed is a policy decision to be made by the city. We can offer no guidance on this issue other than recommending that those responsible for the legal and economic decision making should be aware of the current regulatory direction.

We appreciate the opportunity to comment on these documents.

Yours truly,

Jacquelin N. Miller
Acting Associate Director

cc: Patrick Takahashi
Reginald Young
Keith Chave
Ted Norton
Peter Flachbart